CLAIMS

1. A recording/reproduction device for an information recording medium on which video data and audio data are recorded independently of each other,

wherein on the information recording medium, in a separate area from a main sequence in which data blocks including original audio data and video data are recorded in succession, an additional sequence in which data blocks including post-record audio data are recorded in succession is formed,

the recording/reproduction device comprising:

a pick-up for recording or reproducing information onto/from the information recording medium, and

a control portion for controlling an operation of the pick-up,

wherein during reproduction from the information recording medium, the control portion controls an operation of the pick-up in such a manner that the pick-up accesses the main sequence and the additional sequence alternately and reproduces successive M (M is an integer of 2 or larger) data blocks in every access to each of the main sequence and the additional sequence.

2. The recording/reproduction device according to claim 1,

wherein the control portion controls an operation of the pick-up in such a manner that between audio data and video data corresponding to each other in a same real-time, the audio data is recorded before the video data.

3. The recording/reproduction device according to claim 2,

wherein the control portion controls an operation of the optical pick-up in such a manner that when M data blocks corresponding to each other in a same real-time are read out from each of the main sequence and the additional sequence, (1) original audio data is reproduced from a head block of the M data blocks in the main sequence, (2) post-record audio data is

reproduced in succession from the M data blocks in the additional sequence, corresponding to the M data blocks in the main sequence, (3) video data is reproduced from the head block of the main sequence, and (4) original audio data and video data are reproduced from (M-1) data blocks in the main sequence.

4. The recording/reproduction device according to any one of claims 1 to 3,

wherein when a total amount of video data that is read out from (M+1) data blocks is taken as YV, a bit rate of the video data is taken as VdV, a time necessary for reading out the video data from the (M+1) data blocks is taken as Tsv, and a process time that is necessary for processes other than reading out of the video data during a period between a time when reading out of the video data from the first data block is started and a time when reading out of the video data from the (M+1)-th data block is ended in the (M+1) data blocks is taken as Tnv,

YV/VdV≥Tsv+Tnv is satisfied.

5. A recording/reproduction device that records video data and audio data independently of each other onto an information recording medium,

wherein on the information recording medium, in a separate area from a first area in which data blocks including original audio data and video data are to be recorded, a second area in which data blocks including post-record audio data are to be recorded is provided,

the recording/reproduction device comprising:

a pick-up for recording or reproducing information onto/from the information recording medium, and

a control portion for controlling an operation of the pick-up,

wherein when post-record audio data is recorded onto the information recording medium on which original audio data and video data

are recorded, the control portion controls an operation of the pick-up in such a manner that successive M (M is an integer of 2 or larger) data blocks are reproduced from the first area, and then M data blocks including post-record audio data corresponding to the M data blocks are recorded into the second area in succession.

6. The recording/reproduction device according to claim 5,

wherein when original audio data and video data are recorded in the first area, the control portion controls the pick-up in such a manner that the video data and the audio data are recorded alternately with a space within a range of fine seek of the pick-up.

7. The recording/reproduction device according to claim 5 or 6, further comprising:

a video reproduction buffer for accumulating video data that is read out from the information recording medium, an audio reproduction buffer for accumulating audio data that is read out from the information recording medium, a recording buffer for temporarily storing the post-record audio data before it is recorded, a video decoder for decoding video data, an audio decoder for decoding audio data, and an encoder for encoding audio data,

wherein the value of M is within a range in which during the M data blocks are reproduced from the first area in succession, neither of the video reproduction buffer, the audio reproduction buffer, and the recording buffer overflows or underflows, and transfer of video data to the video decoder does not stop.

8. The recording/reproduction device according to claim 7,

wherein when Tf(j): an access time from an ending edge of a video data recording area to a starting edge of an audio data recording area for post-record editing, after the video data is reproduced,

Vt: a data rate when data is read out from the information recording medium,

TI: a time necessary for reproducing data that is recorded in a video data recording area,

VdV: a bit rate of video data,

N: a number of audio channels,

VdA: a bit rate of audio data, and

Tfv: an access time from an ending edge of an audio data recording area to a starting edge of a next audio data recording area,

the value of M satisfies

$M \geq (Tf(j) \times Vt)/(TI \times (Vt - VdV - 2 \times N \times VdA) - Tfv \times Vt)$.

9. The recording/reproduction device according to claim 7 or 8,

wherein the audio data has a plurality of channels, and

wherein the recording/reproduction device comprises a plurality of audio decoders in accordance with the plurality of channels.